

WHAT IS CLAIMED IS:

1. A game apparatus that uses an ultraviolet ray for a game, comprising:
a game program storing means for storing a game program;
an operating means for inputting operating information by a player;
5 an ultraviolet ray value detecting means for detecting an ultraviolet ray value;
a correcting-data storing means for storing correcting data for correcting the
ultraviolet ray value;

an ultraviolet ray value correcting means for correcting the ultraviolet ray value
detected by said ultraviolet ray value detecting means based on said correcting data; and
10 a game process means that executes the game based on the game program stored in
said game program storing means and the operating information input by said operating
means, and uses for the game the ultraviolet ray value corrected by said ultraviolet ray
value correcting means.

2. A game apparatus according to claim 1, wherein
15 said correcting data includes a correcting value associated with a month/date, and
a time; further comprising
a first time-measuring means for measuring the month/date and the time; wherein
said ultraviolet ray value correcting means corrects the ultraviolet ray value
detected by said ultraviolet ray value detecting means based on the correcting value
20 corresponding to the month/date and the time measured by said first time-measuring
means.

3. A game apparatus according to claim 1, wherein
said correcting-data storing means further stores two or more graph data having
the ultraviolet ray value showing a change in time different depending on a period turned
25 into a graph, further comprising

a determining means for determining one graph data by comparing the ultraviolet ray value detected by said ultraviolet ray value detecting means with the ultraviolet ray value of said graph data; wherein

said ultraviolet ray value correcting means corrects the ultraviolet ray value detected by said ultraviolet ray value detecting means based on the correcting data corresponding to the graph data determined by said determining means.

4. A game apparatus according to claim 3, further comprising

a difference detecting means for detecting a difference between the ultraviolet ray value detected by said ultraviolet ray value detecting means and the ultraviolet ray value of said graph data; wherein

said determining means determines the graph data of a case that the difference detected by said difference detecting means is rendered the minimum.

5. A game apparatus according to claim 4, further comprising

an ultraviolet ray value recording means for recording the ultraviolet ray value detected by said ultraviolet ray value detecting means according to a relative time-period; and

a setting means for setting to an absolute time at which the highest ultraviolet ray value is detected out of the ultraviolet ray values of said graph data a relative time at which the highest ultraviolet ray value is detected out of the ultraviolet ray values detected by said ultraviolet ray value detecting means; wherein

said difference detecting means detects a difference at a time that said relative time is set to said absolute time by said setting means.

6. A game apparatus according to claim 5, wherein

said setting means includes an adjusting means for adjusting in such a manner that all the ultraviolet ray values detected by said ultraviolet ray value detecting means are

contained between a sunrise and a sunset in said graph data.

7. A game apparatus according to claim 3, further comprising
a second time-measuring means for measuring a time; wherein
said determining means compares the ultraviolet ray value detected by the
5 ultraviolet ray value detecting means with the ultraviolet ray value of said graph data
corresponding to the time measured by said second time-measuring means so as to
determine said one graph data.

8. A game apparatus according to claim 1, further comprising
a third time-measuring means for measuring a detected time-period of the
10 ultraviolet ray value by said ultraviolet ray value detecting means;
an accumulated-value calculating means for calculating an accumulated value of
the ultraviolet ray based on the ultraviolet ray value detected by said ultraviolet ray value
detecting means and the detected time-period measured by said third time-measuring
means;

15 an accumulated-value determining means for determining whether or not the
accumulated value calculated by said accumulated-value calculating means is equal to or
larger than a predetermined value; and

a game-process prohibiting means for prohibiting a game process when
determined by said accumulated-value determining means that the accumulated value is
20 equal to or larger than the predetermined value.

9. A game apparatus according to claim 1, further comprising
a sound controlling means for changing a sound in correspondence with the
ultraviolet ray value detected by said ultraviolet ray value detecting means, and a sound
outputting means for outputting the sound changed by said sound controlling means.

25 10. A game apparatus according to claim 9, wherein

said sound controlling means changes at least one of a kind, a stress, a pitch, a tempo, and a melody of the sound.

11. A game apparatus that uses an ultraviolet ray for a game, comprising:

a game program storing means for storing a game program;

5 an operating means for inputting operating information by a player;

an ultraviolet ray value detecting means for detecting an ultraviolet ray value;

a game process means for executing the game based on the game program stored in said game program storing means and the operating information input by said operating means, and using for the game the ultraviolet ray value detected by said ultraviolet ray value detecting means;

10 a first time-measuring means for measuring a detected time-period of the ultraviolet ray value by said ultraviolet ray value detecting means;

an accumulated-value calculating means for calculating an accumulated value of the ultraviolet ray based on the ultraviolet ray value detected by said ultraviolet ray value detecting means and the detected time-period measured by said first time-measuring means;.

an accumulated-value determining means for determining whether or not the accumulated value calculated by said accumulated-value calculating means is equal to or larger than a predetermined value; and

20 a game-process prohibiting means for prohibiting a game process by said game process means when determined by said accumulated-value determining means that the accumulated value is equal to or larger than the predetermined value.

12. A game apparatus according to claim 11, further comprising

a warning means for issuing a warning that the game that uses said ultraviolet ray value cannot be played when determined by said accumulated-value determining means

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that the accumulated value is equal to or larger than the predetermined value.

13. A game apparatus according to claim 11, wherein

said game-process prohibiting means prohibits the ultraviolet ray value detected by said ultraviolet ray value detecting means from being used for the game.

5 14. A game apparatus according to claim 11, wherein

said game-process prohibiting means forcibly ends the game process by said game process means, further comprising

a back-up means for backing-up game data immediately before the game process is forcibly ended by said game-process prohibiting means.

10 15. A game apparatus according to claim 11, further comprising

a second time-measuring means for measuring an elapsed time-period from a time that the game process is prohibited by said game-process prohibiting means;

an elapsed time-period determining means for determining whether or not the elapsed time-period measured by said second time-measuring means exceeds a

15 predetermined time period; and

a game-process-prohibition canceling means for canceling a game process prohibition when said elapsed time-period exceeds the predetermined time period; wherein

said game-process prohibiting means continues the game process prohibition when said elapsed time-period does not exceed said predetermined time period.

20 16. A game apparatus according to claim 14, further comprising

a game data storing means including at least a first back-up area and a second back-up area; and

a selecting means for selecting one of the game data stored in said first back-up area and the game data stored in said second back-up area when starting the game;

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wherein

said back-up means writes into said first back-up area the game data at a certain time when responding to an instruction of a player, and writes into said second back-up area the game data at a certain time when immediately before the game process is prohibited by said game-process prohibiting means.

17. A game apparatus according to claim 11, further comprising

a sound controlling means for changing a sound in correspondence with the ultraviolet ray value detected by said ultraviolet ray value detecting means, and a sound outputting means for outputting the sound changed by said sound controlling means.

18. A game apparatus according to claim 17, wherein

said sound controlling means changes at least one of a kind, a stress, a pitch, a tempo, a melody of the sound.

19. A storing means that stores a game program of a game apparatus provided with an operating means for inputting operating information by a player, facilitating a game by generating and displaying a game image on a displaying means corresponding to the operating information, and using an ultraviolet ray for the game,

said game apparatus is further provided with a correcting-data storing means for storing correcting data for correcting an ultraviolet ray value,

said game program allows a processor of said game apparatus to execute following steps of:

an ultraviolet ray value detecting step for detecting the ultraviolet ray value;

an ultraviolet ray value correcting step for correcting the ultraviolet ray value detected by said ultraviolet ray value detecting step based on said correcting data;

and

a game process step for using for the game the ultraviolet ray value corrected by said ultraviolet ray value correcting step.

20. A storing means that stores a game program of a game apparatus provided with an operating means for inputting operating information by a player, facilitating a game by
5 generating and displaying a game image on a displaying means corresponding to the operating information, and using an ultraviolet ray for the game,

said game program allows a processor of said game apparatus to execute following steps of:

an ultraviolet ray value detecting step for detecting the ultraviolet ray
10 value;

a game process step for using for the game the ultraviolet ray value detected by said ultraviolet ray value detecting step;

a time-measuring step for measuring a detected time-period of the ultraviolet ray value by said ultraviolet ray value detecting step;

15 an accumulated value calculating step for calculating an accumulated value of the ultraviolet ray based on the ultraviolet ray value detected by said ultraviolet ray value detecting step and the detected time-period measured by said time-measuring step;

an accumulated-value determining step for determining whether or not the accumulated value calculated by said accumulated value calculating step is equal to or
20 larger than a predetermined value; and

a game-process prohibiting step for prohibiting a game process when determined by said accumulated-value determining step that the accumulated value is equal to or larger than the predetermined value.

21. A game method of a game apparatus provided with a game program storing
25 means for storing a game program and an operating means for inputting operating

information by a player, and using an ultraviolet ray for a game,

said game apparatus is further provided with a correcting-data storing means that stores correcting data for correcting an ultraviolet ray value,

said game method includes following steps of:

5 (a) detecting the ultraviolet ray value,

(b) correcting the ultraviolet ray value detected by said step (a) based on said correcting data, and

(c) executing the game based on the game program stored in the game program storing means and the operating information input by said operating means, and using for
10 the game the ultraviolet ray value corrected by said step (b).

22. A game method of a game apparatus provided with a game program storing means storing a game program and an operating means for inputting operating information by a player, and using an ultraviolet ray for a game, comprising following steps of:

15 (a) detecting the ultraviolet ray value,

(b) executing the game based on the game program stored in said game program storing means and the operating information input by said operating means, and using for the game the ultraviolet ray value detected by said step (a),

(c) measuring a detected time-period of the ultraviolet ray value by said step (a),

20 (d) calculating an accumulated value of the ultraviolet ray based on the ultraviolet ray value detected in said step (a) and the detected time-period measured in said step (c),

(e) determining whether or not the accumulated value calculated by said step (d) is equal to or larger than a predetermined value, and

(f) prohibiting a game process by said step (b) when determined in said step (e)
25 that the accumulated value is equal to or larger than the predetermined value.